

## News Release

U.S. Department of the Interior  
U.S. Geological Survey

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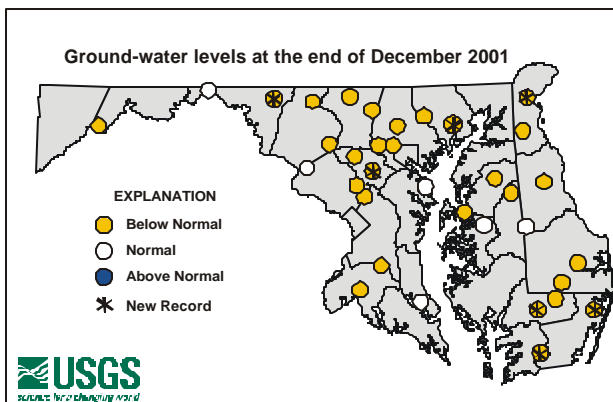
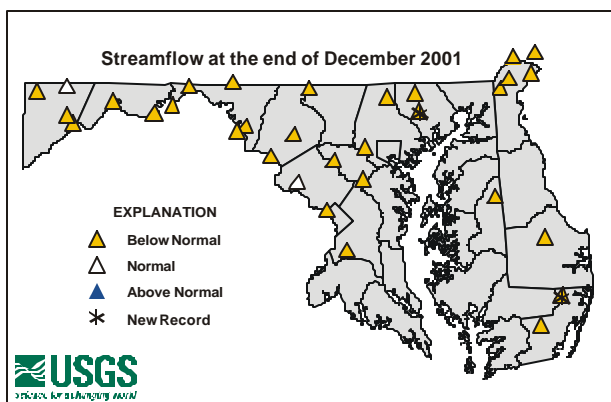
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### Below Normal Rainfall and Warm Temperatures Lead to Record Low Water Levels in December

Three months of above normal temperatures and four months of below normal rainfall have led to record low monthly streamflow and ground-water levels, according to hydrologists at the U.S. Geological Survey (USGS) in Baltimore, Maryland. Streamflow was below normal at 94 percent of the real-time USGS gaging stations and 83 percent of the USGS observation wells across Maryland and Delaware in December.

Record low streamflow levels for December were set at Winters Run and Pocomoke River. Streamflow levels at Deer Creek and Winters Run in Harford County have frequently set new record daily lows for the last four months (see real-time graphs at <http://md.water.usgs.gov/realtime/>). Streamflow was also significantly below normal at Antietam Creek, Choptank River, Conococheague Creek, Nassawango Creek, Patapsco River, Gunpowder River, Patuxent River, Piscataway Creek, Monocacy River, and Potomac River in Maryland, and Christina River, St. Jones River, and White Clay Creek in Delaware. The monthly streamflow in the Potomac River near Washington, D.C. was 82 percent below normal in December and 54 percent below normal for 2001.

Streamflow entering the Chesapeake Bay averaged 23.7 bgd (billion gallons per day), which is 54 percent below the long-term average for December. Much of the flow was from the Susquehanna River, which provided 68 percent, compared to its long-term average of 50 percent. Streamflow into the Bay for 2001 was 36 percent below average. Streamflow has been below average since last January, except during April (see graphs at <http://md.water.usgs.gov/monthly/bay.html>).



For news release and images, go to [http://md.water.usgs.gov/publications/press\\_release/2002/2002-01/](http://md.water.usgs.gov/publications/press_release/2002/2002-01/)

Record low ground-water levels for December were set at seven water-table observation wells in Harford, Howard, Somerset, Washington, Wicomico, and Worcester Counties in Maryland, and New Castle County in Delaware (see graphs at <http://md.water.usgs.gov/groundwater/>). Ground-water levels were also significantly below

normal in Allegany, Baltimore, Carroll, Charles, Frederick, Montgomery, and Queen Annes Counties in Maryland, and Kent County in Delaware.

Storage in the Baltimore Reservoir system decreased to 62 percent of capacity in December. Rainfall has been below normal since September across Maryland and Delaware. In northern central Maryland, rainfall was more than 10 inches below normal in 2001, according to the Middle Atlantic River Forecast Center. Above normal rain or snow is still needed to replenish the low streamflow and ground-water levels in order to avoid drought conditions next spring and summer.

As the Nation's largest water, earth and biological science, and civilian mapping agency, the USGS works in cooperation with more than 2,000 organizations across the country to provide reliable, impartial scientific information to resource managers, planners, and other customers. This information is gathered in every state by USGS scientists to minimize the loss of life and property from natural disasters, contribute to the sound conservation and the economic and physical development of the Nation's natural resources, and enhance the quality of life by monitoring water, biological, energy, and mineral resources.

**\* \* \* USGS \* \* \***

In-depth information about USGS programs may be found on the USGS home page at <http://www.usgs.gov> and <http://chesapeake.usgs.gov/> for Chesapeake Bay activities. To receive the latest USGS news releases automatically by e-mail, send a request to <mailto:listproc@listserver.usgs.gov>. Specify the listserver(s) of interest from the following names: water-pr; geologic-pr; hazards-pr; biological-pr; mapping-pr; products-pr; lecture-pr. In the body of the message write: subscribe (name of listserver) (your name). Example: water-pr joe smith.